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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,271	03/31/2004	Pak-Lung Seto	32319.P18315	7486

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Grossman, Tucker, Perreault & Pfleger, PLLC
c/o PortfolioIP
P.O. Box 52050
Minneapolis, MN 55402

EXAMINER

PARK, ILWOO

ART UNIT	PAPER NUMBER
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2182

MAIL DATE	DELIVERY MODE
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06/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/815,271	Applicant(s) SETO ET AL.	
	Examiner Ilwoo Park	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-8, 11-13, 16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 11-13, 16, and 18-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 6 and 21 are amended and claims 4,5,9,10,14,15, and 17 are canceled, and claims 22-24 added in response to the last office action. Claims 1-3, 6-8, 11-13, 16, and 18-24 are presented for examination.

Response to Arguments

2. Applicant's arguments filed 3/20/2007 have been fully considered but they are not persuasive. In the Remarks, Applicant argues in substance that Iliadis does not disclose that the conventional high and low thresholds H and L are adjustable because of "fixed thresholds H and L" disclosed in Iliadis [col. 4, lines 65-67]. Even though the thresholds are variable, Iliadis does not appear to disclose expressly that the variable thresholds are adjustable. The Examiner respectfully disagrees.

For an efficient use of the combination of shared and dedicated buffer, a preferred embodiment of the invention employs variable thresholds at which start and stop signals controlling single connections are generated. In this embodiment, the threshold is altered depending on the potential shared buffer occupation. [Iliadis: col. 4, lines 10-15]

Nowhere in the Iliadis discloses that the fixed or variable thresholds cannot be adjustable; rather, Iliadis expressly discloses the thresholds, as described above, are adjustable [variable, alterable]. Thus, the arguments are not persuasive and rejections are respectfully maintained.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2182

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Iliadis [US 5,995,486].

As for claim 1, Iliadis teaches a method comprising:

receiving data in a receive buffer; and

sending [col. 2, lines 32-37] a hold command to a transmitting node currently sending data to hold transmission of additional data when a level of said data in said receive buffer reaches an adjustable high threshold level [col. 4, lines 10-15; col. 7, lines 3-13]; and

holding transmission of said additional data until said data in said receive buffer reaches an adjustable low threshold level [col. 4, lines 10-15; col. 5, lines 50-59; col. 7, lines 3-13].

5. As for claim 2, Iliadis teaches said adjustable high threshold level is adjustable in response to a transmission rate of said additional data [col. 3, lines 21-29; rate controlled connections in fig. 5].

6. As for claim 3, Iliadis teaches receiving a hold acknowledge command acknowledging said hold command, and wherein said adjustable high threshold level is adjustable in response to an elapsed time interval between sending of said hold command and receiving of said hold acknowledge command [round-trip delay in TCP acknowledgement based flow control: col. 1, lines 50-52; col. 3, lines 21-29].

7. As for claims 6-8, 11-13, and 16, Iliadis also teaches an apparatus, an article, and a system for performing a method discussed above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iliadis [US 5,995,486] in view of Nemazie [US 2004/0252716 A1].

As for claim 22, Iliadis teaches a system comprising:

at least one receive buffer [fig. 3];

buffer control circuitry configured to control storage of data in and retrieval of data from the at least one receive buffer, the buffer control circuitry being configured to sense when a level of data in the receive buffer reaches an adjustable high threshold [col. 4, lines 10-15]; and

link layer circuitry configured to send [col. 2, lines 32-37] a hold command to a transmitting node [upstream node] currently sending data in response to the buffer control circuitry sensing that the level of data in the receive buffer reaches the adjustable high threshold level.

However, Iliadis does not explicitly teaches the link layer circuitry being compatible with a Serial Advanced Technology Attachment (SATA) protocol or a Serial Attached Small Computer Systems Interface (SAS) protocol. Nemazie teaches a link layer circuitry configured to send a hold command [HOLD primitive] to a transmitting node [transmitter node] currently sending data in response to a buffer control circuitry

sensing ["receiver node detects that its buffer is almost full" in paragraph 0013] that a level of data in the receive buffer reaches a high threshold level and the link layer circuitry being compatible with a Serial Advanced Technology Attachment (SATA) protocol [paragraph 0011]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Iliadis and Nemazie because they both teach a data transfer and flow control between a transmitting node and a receive buffer through a packet communication link and the Nemazie's teaching of the communication link compatible with a recently booming Serial Advanced Technology Attachment (SATA) protocol would increase adaptability/applicability in a communication link.

10. As to claim 18, Iliadis teaches said adjustable high threshold level is adjustable in response to a transmission rate of said additional data [col. 3, lines 21-29; rate controlled connections in fig. 5].

11. As to claim 19, Iliadis teaches the link layer circuitry is further capable of receiving a hold acknowledge command acknowledging said hold command, and wherein said adjustable high threshold level is adjustable in response to an elapsed time interval between sending of said hold command and receiving of said hold acknowledge command [round-trip delay in TCP acknowledgement based flow control: col. 1, lines 50-52; col. 3, lines 21-29].

12. As to claim 20, Iliadis teaches the link layer circuitry is further capable of maintaining the hold command holding transmission of said additional data until said

Art Unit: 2182

data in said receive buffer reaches a low threshold level [col. 4, lines 10-15; col. 5, lines 50-59].

13. As to claim 21, Iliadis teaches said low threshold level comprises an adjustable low threshold level [col. 4, lines 10-15].

14. As to claim 23, Nemazie teaches PHY layer circuitry configured to interface with a communication link or to another PHY [e.g., fig. 1a].

15. As to claim 24, Nemazie teaches the hold command includes a HOLD primitive [paragraph 0013].

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 22 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No.

10/815,909. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims 1, 3-5, 7, 8, 13, 14, 16, 17, 19, and 20 of the copending application are claiming common subject matter substantially/functionally equivalent limitations as the present claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

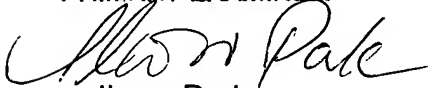
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for

Art Unit: 2182

the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ILWOO PARK
PRIMARY EXAMINER

A handwritten signature in cursive script, appearing to read 'Ilwoo Park', written in black ink.

Ilwoo Park
May 24, 2007